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<i>Title</i>	TC/TM DATABASE FOR THE EPIC PN CAMERA SYSTEM (EPCS)
<i>Authors</i>	LA PALOMBARA, NICOLA
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EPCS CALIBRATION CURVES

EPIC-EST-TN-005 I.3
Appendix J

REF	NAME	DEFINITION
5001	CE_FWTEMP HK	ENG (°C) = RAW*(-0.8967)+186.088
5002	CE_FWSPOT HK	ENG (°C) = RAW*(-0.8547)+417.094
5003	CE_TTMPFPC/TTMP5 HK	ENG (°C) = RAW*(-0.7303)+129.6629
5004	CE_TTMPFPF HK	ENG (°C) = RAW*(-0.07421)-91.2987
5005	CE_U+5D HK	ENG (V) = RAW*0.045
5006	CE_U+5A HK	ENG (V) = RAW*0.044
5007	CE_U-15A HK	ENG (V) = RAW*(-0.13)
5008	CE_UDGND HK	ENG (V) = RAW*0.01954-2.5
5009	CE/VC_TEMP HK	ENG (°C) = RAW*1.73-270
5010	CE_CU+5A	ENG (V) = RAW*0.036
5011	CE_CU-15A	ENG (V) = RAW*(-0.0711)
5101	VC_IMAIN HK	ENG (mA) = RAW*3.617
5102	VC_IQ0 HK	ENG (mA) = RAW*4.0
5103	VC_IQ1 HK	ENG (mA) = RAW*3.777
5104	VC_IQ2 HK	ENG (mA) = RAW*3.273
5105	VC_IQ3 HK	ENG (mA) = RAW*3.491
5106	VC_IHT HK	ENG (mA) = RAW*5.74+42.778
5107	VC_IFW HK	ENG (mA) = RAW*4.082
5108	VC_IT HK	ENG (mA) = RAW*6.818
5109	VC_UHV0-3 HK	ENG (V) = RAW*(-1.01333)+513.76
5110	VC_UHT HK	ENG (V) = RAW*(-0.10756)+54.532
5201	CO/1/3_UAMOS_H/L HK	ENG (V) = RAW*(-0.14315)
5202	CO/1/3_UPHI_H HK	ENG (V) = RAW*(-0.14342)
5203	CO/1/3_UPHI_L HK	ENG (V) = RAW*(-0.14262)
5204	CO/1/3_UFLSH_H HK	ENG (V) = RAW*0.06827
5205	CO/1/3_UFLSH_L HK	ENG (V) = RAW*(-0.10271)
5206	CO/1/3_RFGA_H HK	ENG (V) = RAW*(-0.06684)
5207	CO/1/3_RFGA_L HK	ENG (V) = RAW*(-0.0667)
5208	CO/1/3_U+BIAS HK	ENG (V) = RAW*(0.06683)
5209	CO/1/3_U-BIAS HK	ENG (V) = RAW*(-0.12831)
5210	CO/1/3_UCMXVDD HK	ENG (V) = RAW*0.03229
5211	CO/1/3_UCMXVSS HK	ENG (V) = RAW*(-0.03221)
5212	CO/1/3_U+15 HK	ENG (V) = RAW*0.10667
5213	CO/1/3_U-15 HK	ENG (V) = RAW*(-0.10667)
5214	CO/1/3_U-35 HK	ENG (V) = RAW*(-0.23567)
5215	CO/1/3_UVDD HK	ENG (V) = RAW*0.03548
5216	CO/1/3_UVDDA HK	ENG (V) = RAW*0.04281
5217	CO/1/3_UVSSA HK	ENG (V) = RAW*(-0.04281)
5218	CO/1/2/3_UDGND HK	ENG (V) = RAW*0.01954-2.5
5219	CO/1/3_UVBST HK	ENG (V) = RAW*(-0.05869)
5220	CO/1/3_IVDDA/SSA/SSSA HK	ENG (mA) = RAW*0.29851
5221	CO/1/3_I+15 HK	ENG (mA) = RAW*0.24242-4.3
5222	CO/1/3_I-15 HK	ENG (mA) = RAW*0.23256-4.651
5223	CO/1/3_I-35 HK	ENG (mA) = RAW*0.23809-11.547
5224	CO/1/3_IVDD_D HK	ENG (mA) = RAW*0.03067
5225	CO/1/3_IIS HK	ENG (microA) = RAW*0.34843-44.5993
5226	CO/1/3_IGRA0 HK	ENG (microA) = RAW*1.16279-151.163
5227	CO/1/3_IGRA1 HK	ENG (microA) = RAW*1.15607-150.289
5228	CO/1/3_IGRA2 HK	ENG (microA) = RAW*1.15942-150.145
5229	CO/1/2/3_TEMPCCD HK	ENG (mV) = RAW*(-1.74292)
5230	CO/1/3_TEMPEA HK	ENG (°C) = RAW*1.63934-273
5231	CO/1/3_TEMPQB1 HK	ENG (°C) = RAW*1.62162-273
5232	CO/1/3_TEMPQB2 HK	ENG (°C) = RAW*1.63043-273
5301	C2_UAMOS_H HK	ENG (V) = RAW*(-0.14427)
5302	C2_UAMOS_L HK	ENG (V) = RAW*(-0.1433)
5303	C2_UPHI_H HK	ENG (V) = RAW*(-0.14286)
5304	C2_UPHI_L HK	ENG (V) = RAW*(-0.14206)
5305	C2_UFLSH_H HK	ENG (V) = RAW*0.06818
5306	C2_UFLSH_L HK	ENG (V) = RAW*(-0.10289)
5307	C2_RFGA_H HK	ENG (V) = RAW*(-0.06663)
5308	C2_RFGA_L HK	ENG (V) = RAW*(-0.06628)
5309	C2_U+BIAS HK	ENG (V) = RAW*0.066817
5310	C2_U-BIAS HK	ENG (V) = RAW*(-0.12798)

EPICS CALIBRATION CURVES

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5311	C2_UCMXVDD HK	ENG (V) = RAW*0.032285
5312	C2_UCMXVSS HK	ENG (V) = RAW*(-0.03226)
5313	C2_U+15 HK	ENG (V) = RAW*0.106762
5314	C2_U-15 HK	ENG (V) = RAW*(-0.10714)
5315	C2_U-35 HK	ENG (V) = RAW*(-0.23411)
5316	C2_UVDD HK	ENG (V) = RAW*0.035587
5317	C2_UVDDA HK	ENG (V) = RAW*0.042705
5318	C2_UVSSA HK	ENG (V) = RAW*(-0.04271)
5319	C2_UVBST HK	ENG (V) = RAW*(-0.05825)
5320	C2_IVDDA HK	ENG (mA) = RAW*0.297619
5321	C2_I+15 HK	ENG (mA) = RAW*0.242424-3.333
5322	C2_I-15 HK	ENG (mA) = RAW*0.235294-5.2941
5323	C2_I-35 HK	ENG (mA) = RAW*0.238095-11.3095
5324	C2_IVDD_D HK	ENG (mA) = RAW*0.030488
5325	C2_IIS HK	ENG (microA) = RAW*0.34662-44.3674
5326	C2_IGRA0 HK	ENG (microA) = RAW*1.186944-152.522
5327	C2_IGRA1 HK	ENG (microA) = RAW*1.166181-152.186
5328	C2_IGRA2 HK	ENG (microA) = RAW*1.194030-174.925
5329	C2_IVSSA/IVSSSA HK	ENG (mA) = RAW*0.298214
5330	C2_TEMPEA1/2 HK	ENG (°C) = RAW*1.652893-273
5331	C2_TEMPQB1 HK	ENG (°C) = RAW*1.627027-273
5332	C2_TEMPQB2 HK	ENG (°C) = RAW*1.643836-273
5401	EPDH Primary Power Consumption	ENG [A] = ((Raw Value * 16) / 4095) - 8
5402	EPDH Power Supply Temperature	ENG [°C] = (Raw Value * 0.004884 - 10) * (-25.054) + 83.137
5403	EPDH Power Supply Voltage	ENG [V] = (((Raw Value * 20) / 4095) - 10) * 2